Appl. No. 10/635,739
Amdt. dated December 28, 2005
Reply to Office Action of September 30, 2005

PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1.   (currently amended) A storage device to receive demands for writing and reading data from host devices to control writing and reading of data from storage media, the storage device comprising:

a service processor configured to set configuration information of the storage device[[,]]; and

a terminal device connected to the service processor via a private line to send a command group, which is received from an operator and related to the configuration information of the storage device, to the service processor, the terminal device creating a digest of the command group after determining that the command group is valid, the terminal device using a secret key to encrypt the digest created, and sending to the service processor a digest data of the digest encrypted using the secret key and the command group described on the script sheet;

wherein the service processor decrypts the encrypted digest data received and compares the decrypted digest data with a digest data of the digest created from the command group received, and determines approval or denial of execution of the command group, based on results of comparison between the decrypted digest data and the digest data of the digest created from the command group, prior to execution of the command group received from the terminal device.

2.   (original) The storage device according to claim 1, wherein the terminal device sends encryption command information, which is given by encrypting the command group with a secret key, together with the command group when the command group is sent, and

the service processor decrypts the received encryption command information
to determine whether a command group obtained by the decryption corresponds to the
received command group, and executes the command group in the case of correspondency.

3.   (original) The storage device according to claim 2, wherein the
command group is subjected to a digest processing to be encrypted to provide the encryption
command information, and

the service processor determines whether information subjected to the digest
processing with the use of the command group received from the terminal device corresponds
to information, which is obtained by decryption of the received encryption command
information and subjected to the digest processing, and executes the command group in the
case of correspondency.

4.   (currently amended) A method of setting a configuration information
of a storage device to receive demands for writing and reading of data from host devices to
control writing and reading of data from storage media, the storage device including a service
processor for setting of configuration information of the storage device, and a terminal device
connected to the service processor to send a command group received from an operator and
related to the configuration information, the method comprising

sending the command group via the terminal device[[,]];

receiving the command group at the service processor; and determining
approval or denial of execution of the command group, and

creating a digest of the command group when the command group is
determined to be valid;

using a secret key to encrypt the digest created;

sending by the terminal device to the service processor a digest data of the
digest encrypted using the secret key and the command group;

creating a digest from the command group received by the service processor;

decrypting the encrypted digest data received by the service processor to
compare the decrypted digest data with a digest data of the digest created from the command
group received by the service processor; and

Appl. No. 10/635,739
Amdt. dated December 28, 2005
Reply to Office Action of September 30, 2005

PATENT

executing the command group to set a structure of the storage device in the case where ~~approval of execution is determined~~ <u>results of comparison between the decrypted digest data and the digest data of the digest created from the command group indicates correspondency</u>.

5.   (original) The method according to claim 4, further comprising using a secret key to encrypt the command group sent prior to sending thereof to the service processor to generate encryption command information, and

wherein the encryption command information together with the command group is sent to the service processor;

decrypting the received encryption command information to generate the command group to enable a comparison as to whether the received command group and the command group obtained by the decryption correspond to each other, thus determining approval or denial of execution of the received command group, and

executing the command group to set a structure of the storage device in the case where the command group obtained by the decryption and the received command group correspond to each other.

6.   (currently amended) A method of setting configuration information of a storage device comprising a service processor for setting of configuration information of the storage device, and a terminal device connected to the service processor to give and take information from the service processor, the method comprising:

determining by a storage management terminal validity of a command group described on a script sheet, <u>the command group related to the configuration information of the storage device;</u>

creating a digest of the command group when the command group is determined to be valid[[,]];

using a secret key to encrypt the digest created[[,]];

sending by the terminal device to the service processor a digest data of the digest encrypted using the secret key and the command group described on the script sheet[[,]];

Appl. No. 10/635,739
Amdt. dated December 28, 2005
Reply to Office Action of September 30, 2005

PATENT

creating a digest from the command group received by the service processor[[,]];

decrypting the encrypted digest data received by the service processor to compare the decrypted digest data with a digest data of the digest created from the command group received by the service processor[[,]]; and

executing the command group described on the received script sheet to set a structure of the storage device in the case where results of comparison between the decrypted digest data and the digest data of the digest created from the command group indicates correspondency.

7.   (new) The storage device according to claim 1, wherein the command group is used by the service processor to set the structure of the storage device.

8.   (new) The storage device according to claim 1, wherein the command group contains variable required for execution of commands by the service processor.

9.   (new) The storage device according to claim 1, wherein the command group is described on a script sheet.

10.   (new) The storage device according to claim 9, wherein the script sheet includes a group of operations relating to addition and deletion of path definition information for connection of a host device and logical volumes of the storage device.

11.   (new) The storage device according to claim 10, wherein the script sheet includes a setting procedure that describes respective settings as argument parameters for setting nomenclatures and information required for setting thereof.

12.   (new) The storage device according to claim 9, wherein the script sheet including the command group is determined to be valid by a reliable operator guaranteeing that no tampering has occurred before input into the storage device.

Appl. No. 10/635,739
Amdt. dated December 28, 2005
Reply to Office Action of September 30, 2005

PATENT

13.   (new) The storage device according to claim 9, wherein the digest is created by compressing the script sheet containing the command group.